



APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

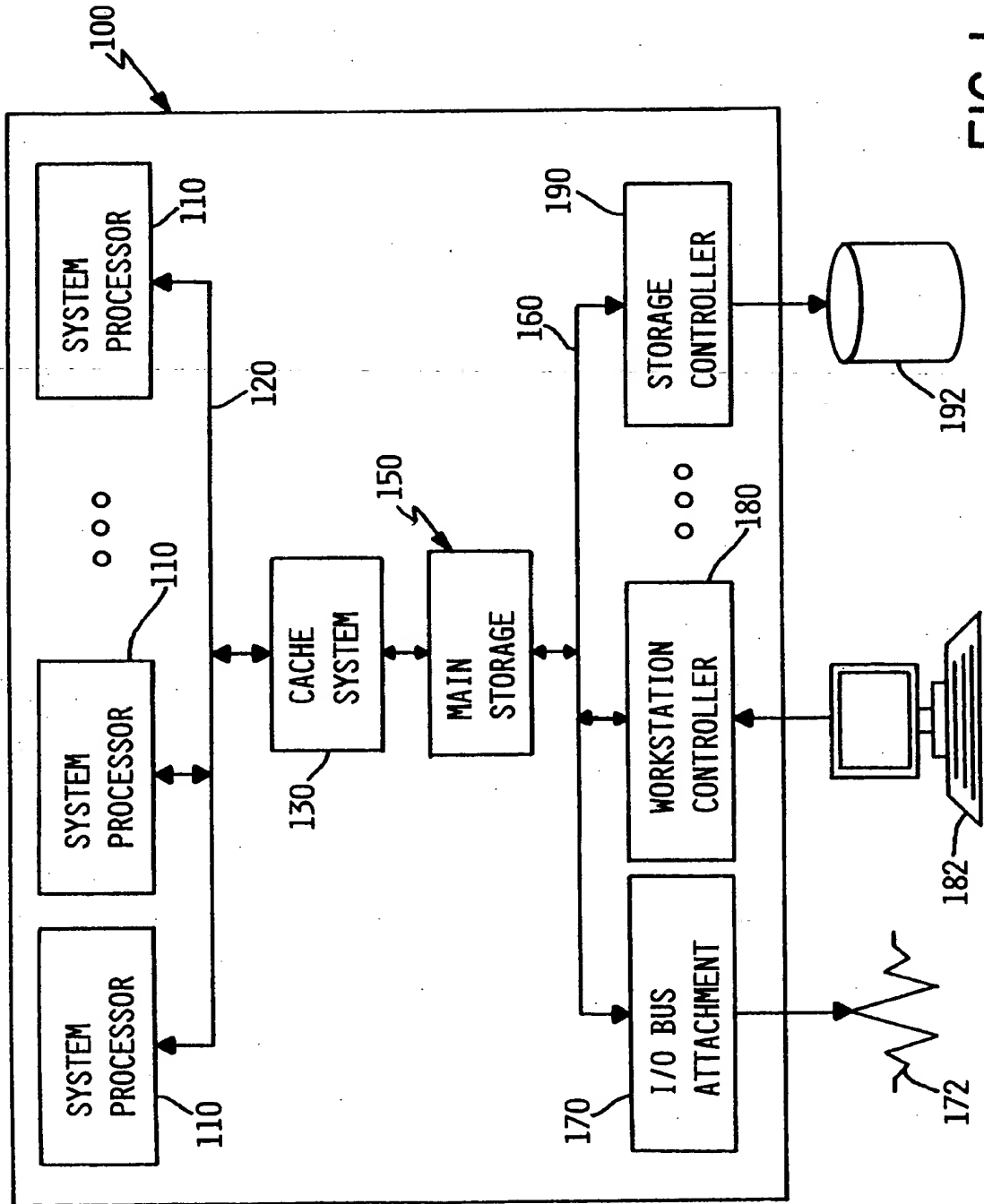


FIG. 1



APPROVED	O.G. FIG.
BY	CLASS
DRAFTSMAN	SUBCLASS

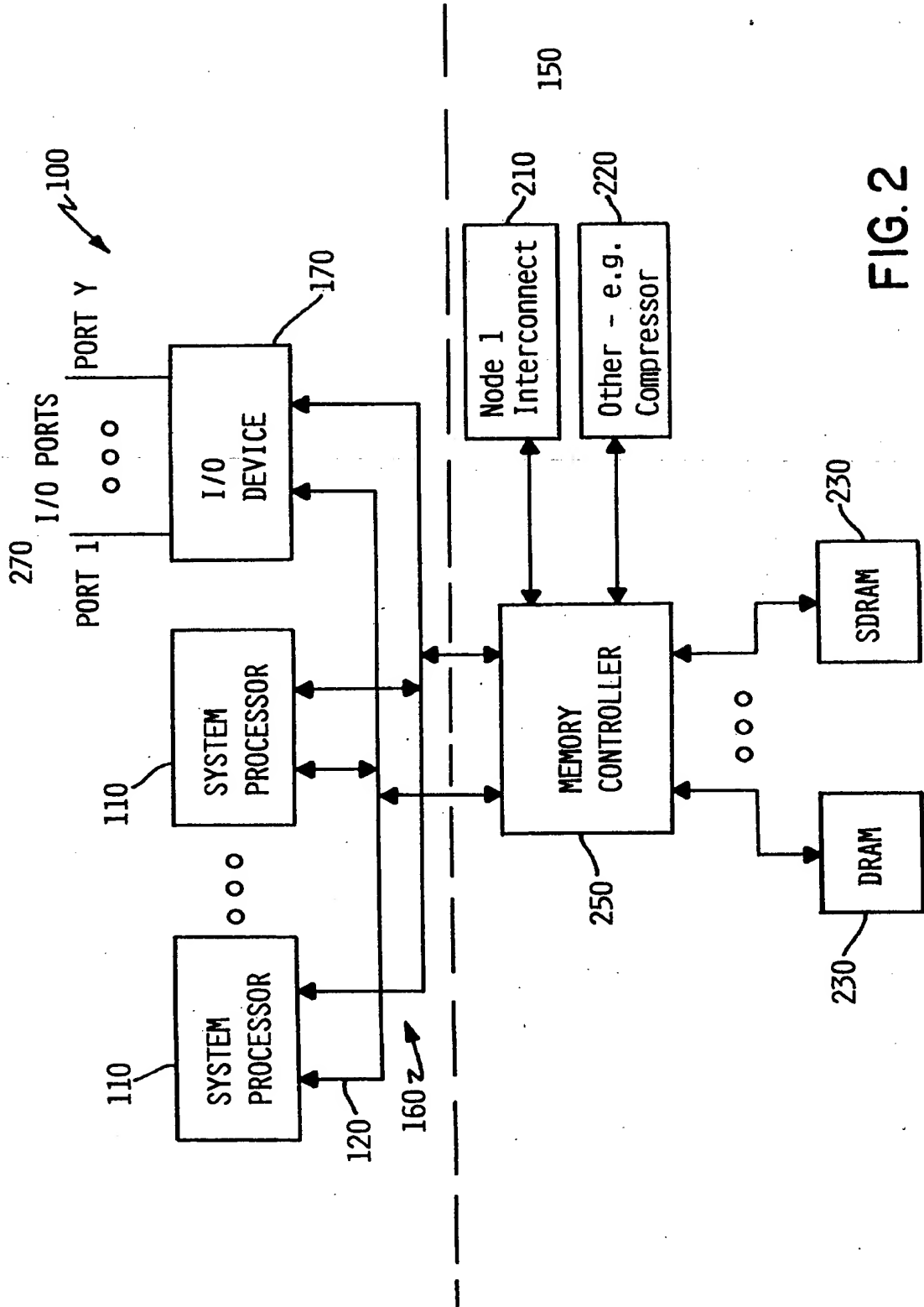


FIG. 2



APPROVED	O. G. FIG.	
BY	CLASS	SUBCLASS
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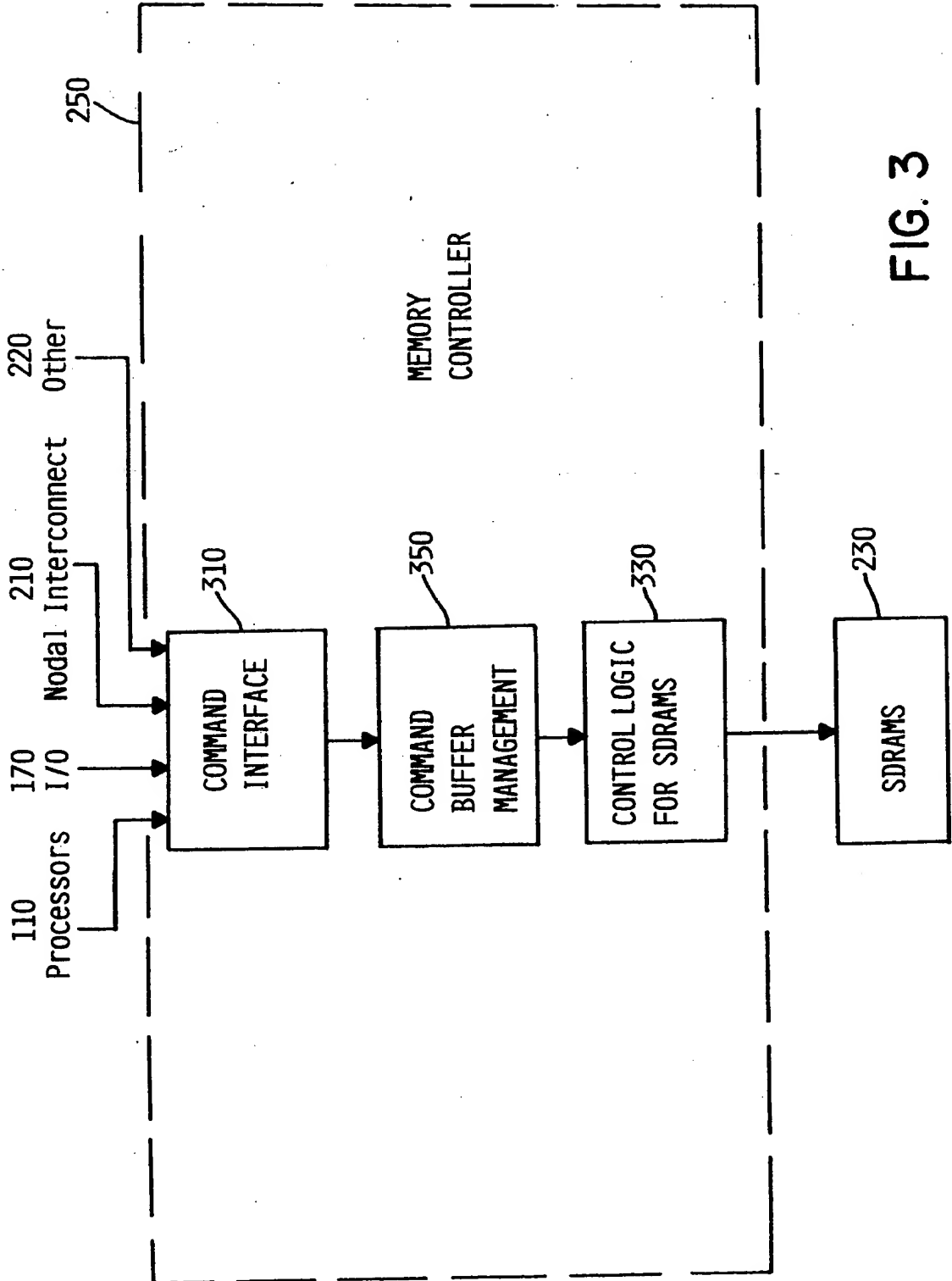


FIG. 3



APPROVED	O.G. FIG.
BY	CLASS SUBCLASS
DRAFTSMAN	

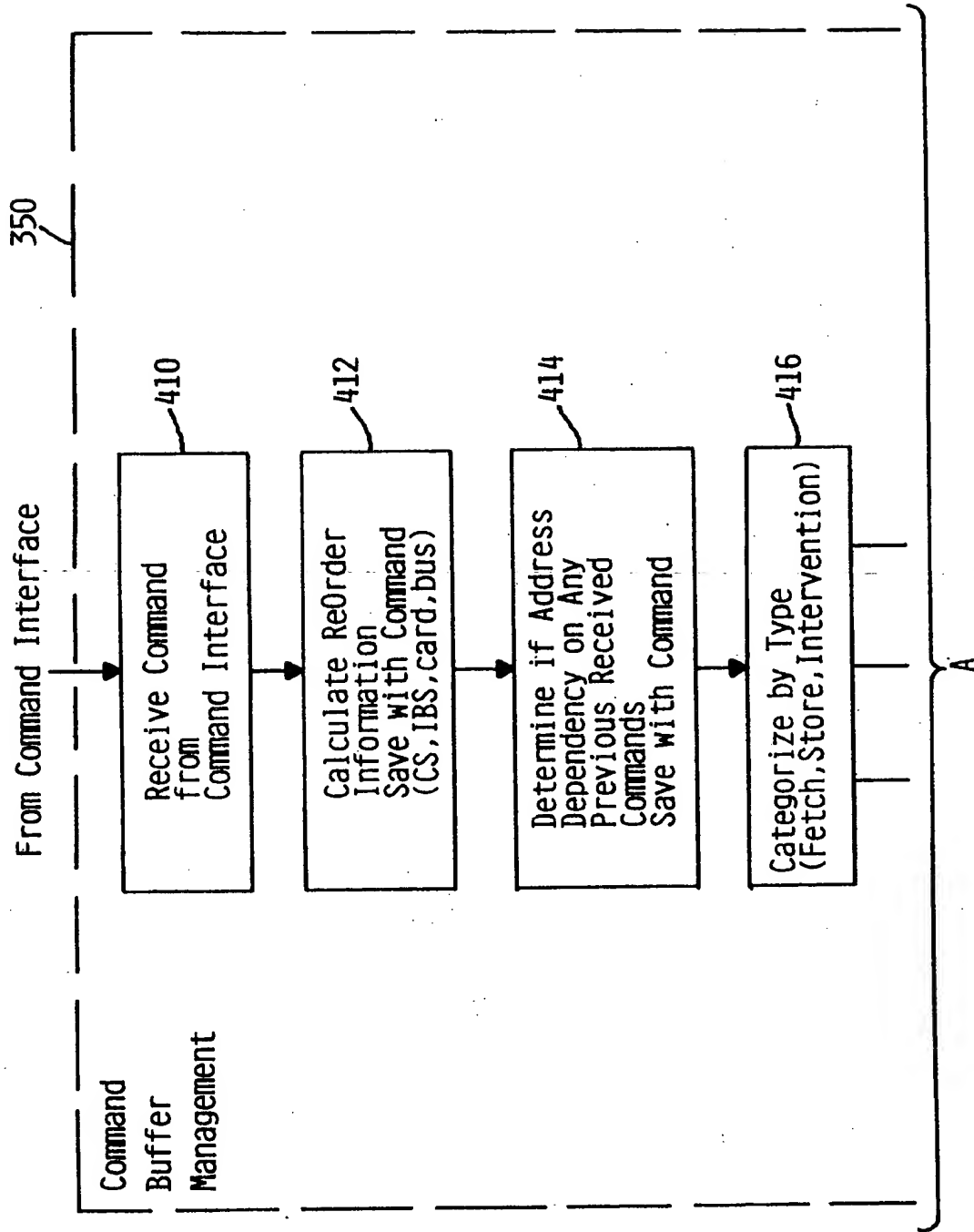


FIG. 4A

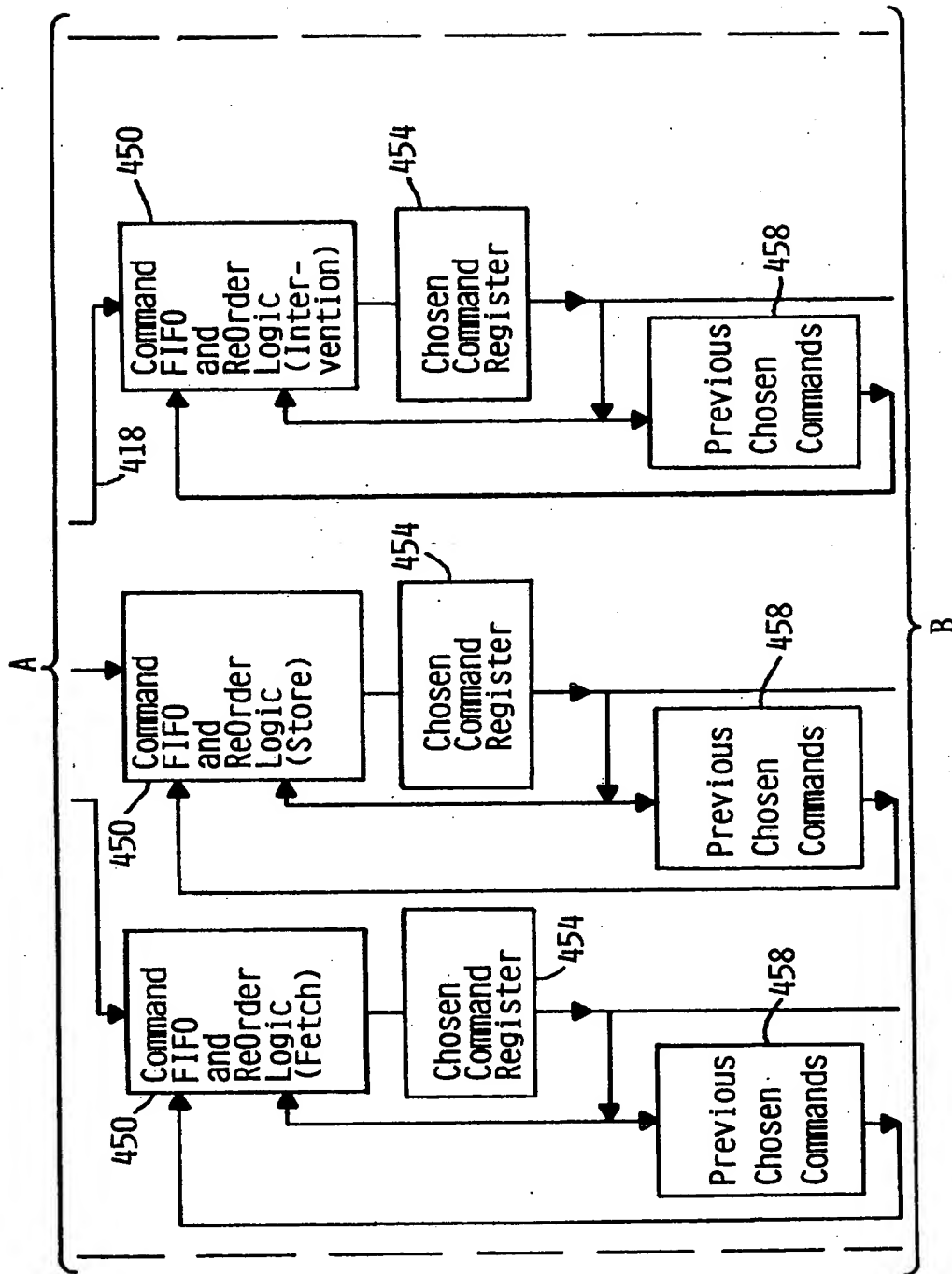


FIG. 4B

APPROVED	O.G. FIG.	CLASS	SUBCLASS
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APPROVED BY DRAFTSMAN	O.G. FIG.	
	CLASS	SUBCLASS

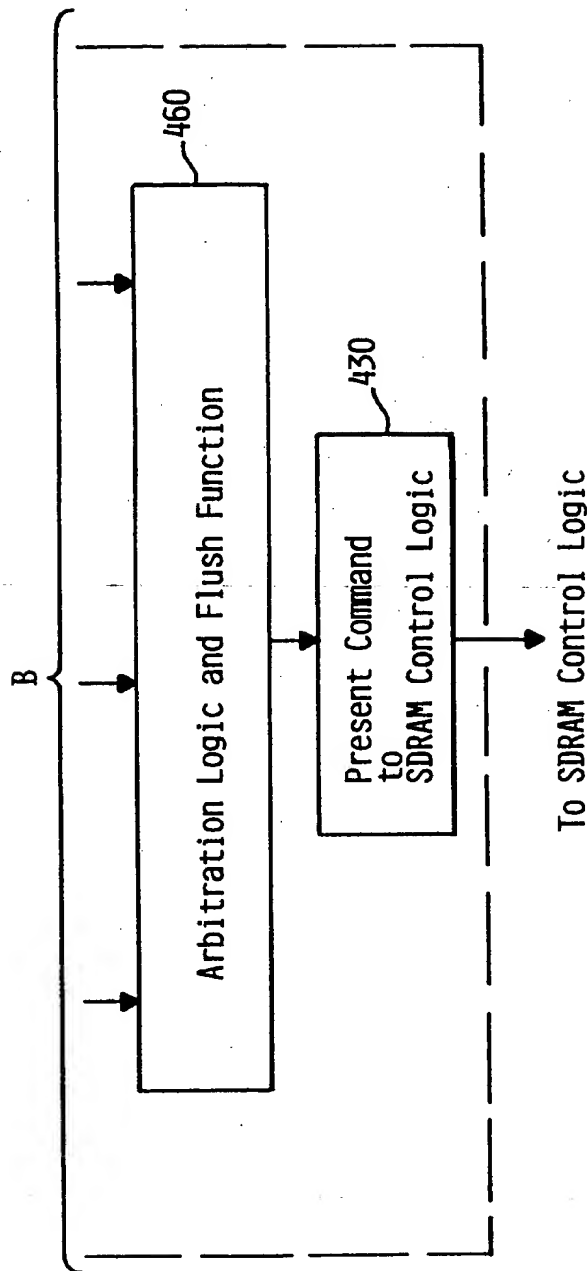


FIG. 4C

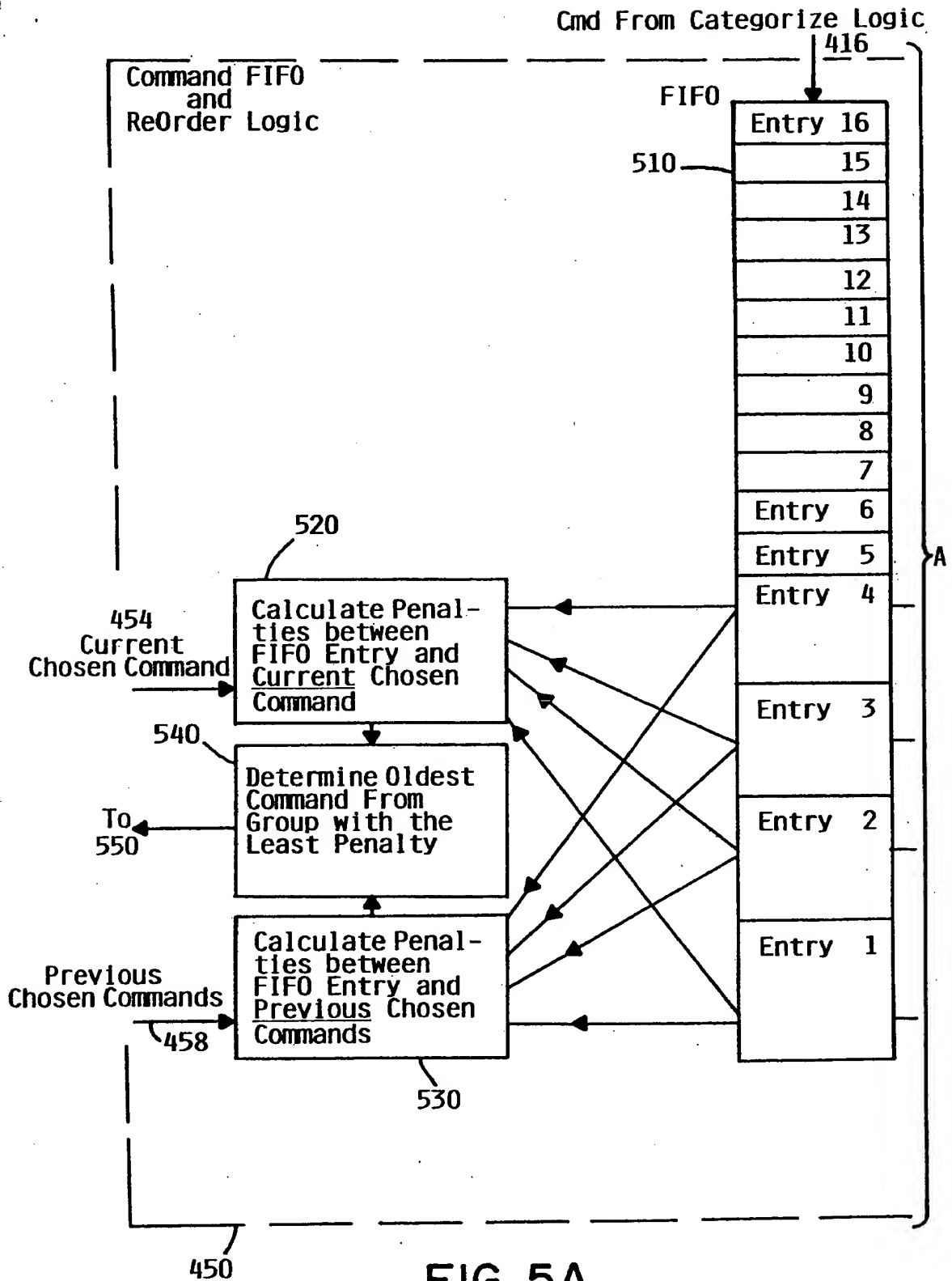
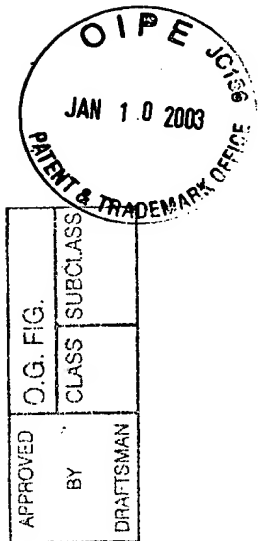


FIG. 5A



APPROVED	O.G. FIG.	
	CLASS	SUBCLASS
BY		
	DRAFTSMAN	

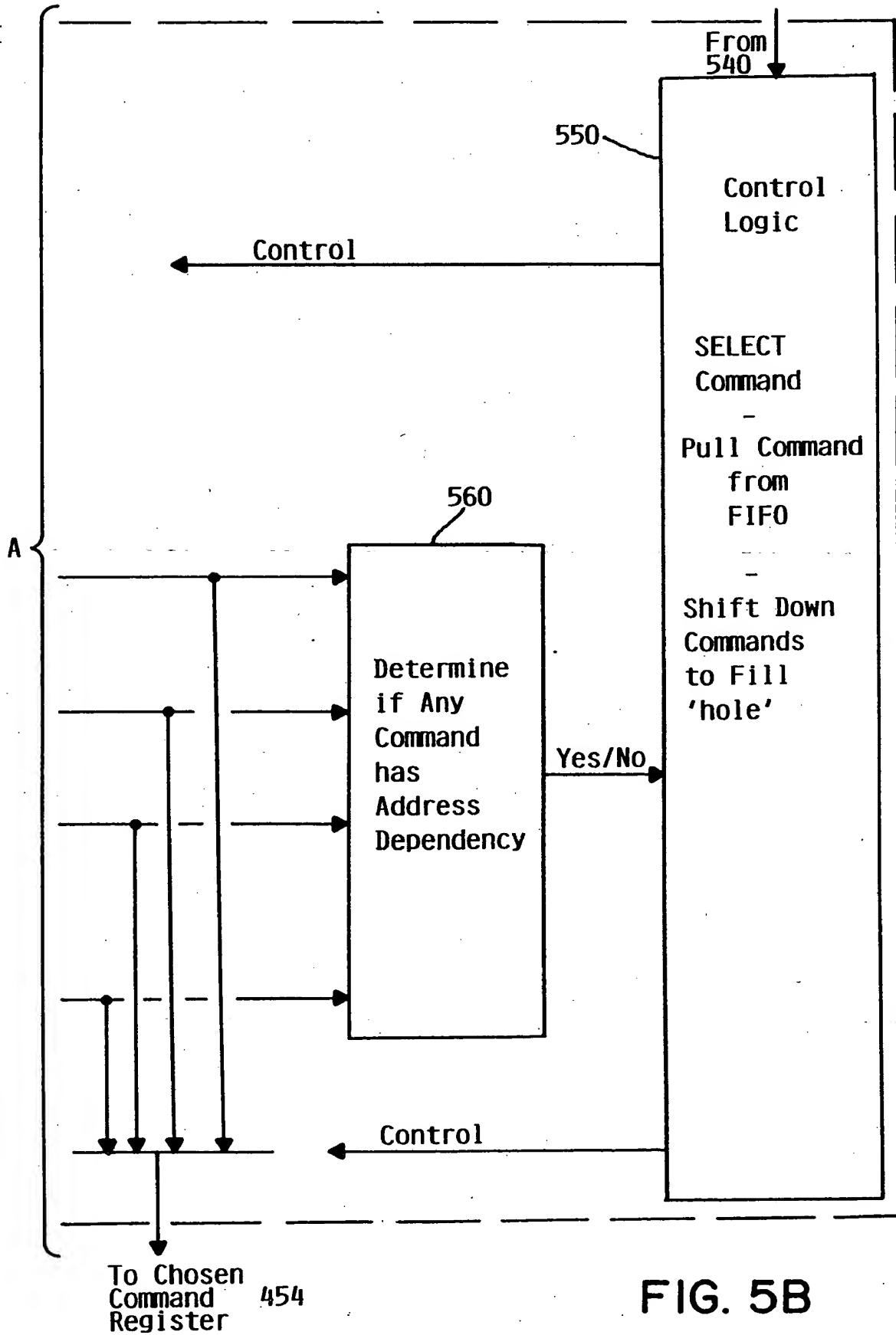


FIG. 5B





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## Command FIFO and Reordering - Flow Diagram

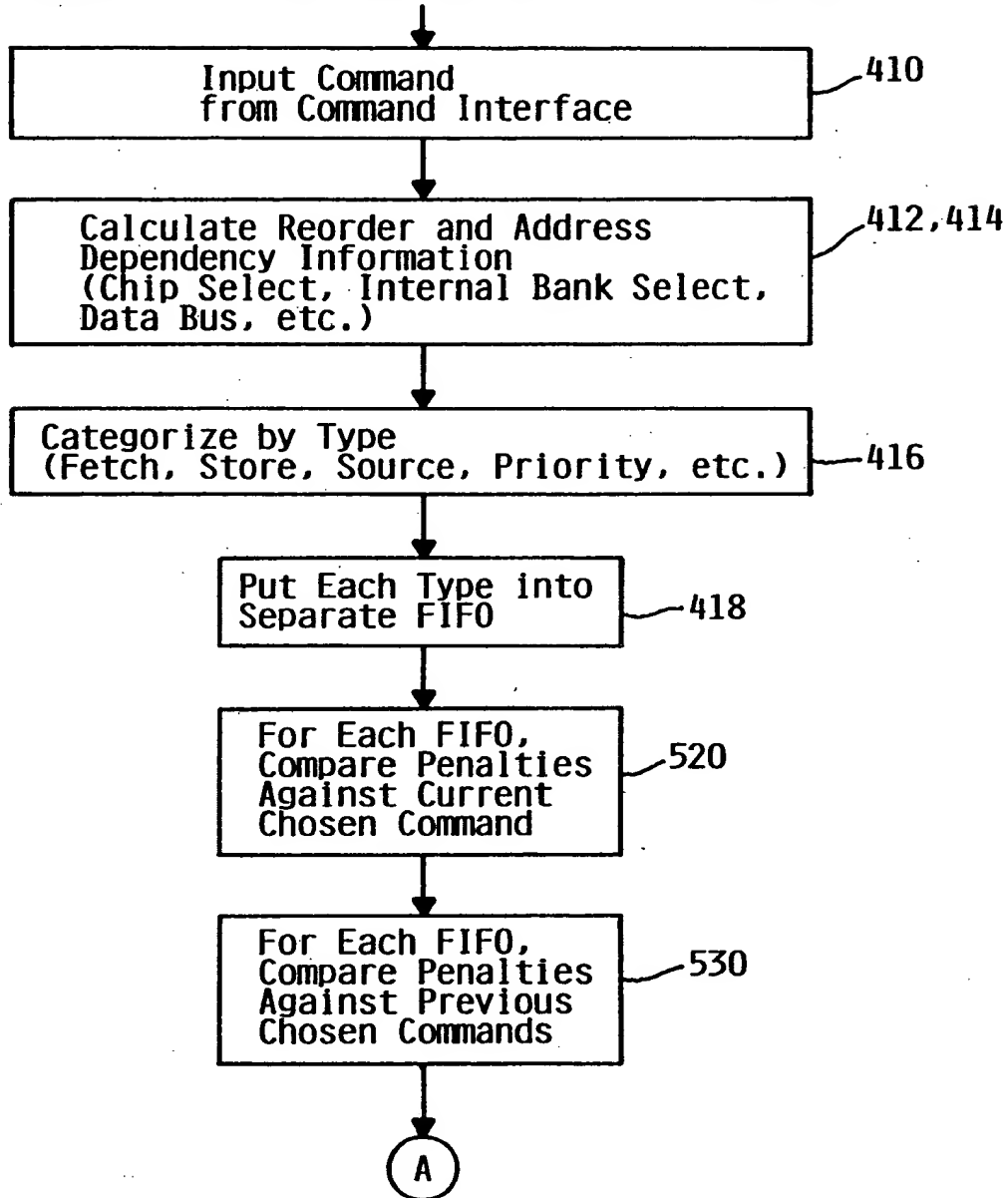


FIG. 6A



APPROVED	Q.G. FIG.	CLASS	SUBCLASS
BY			
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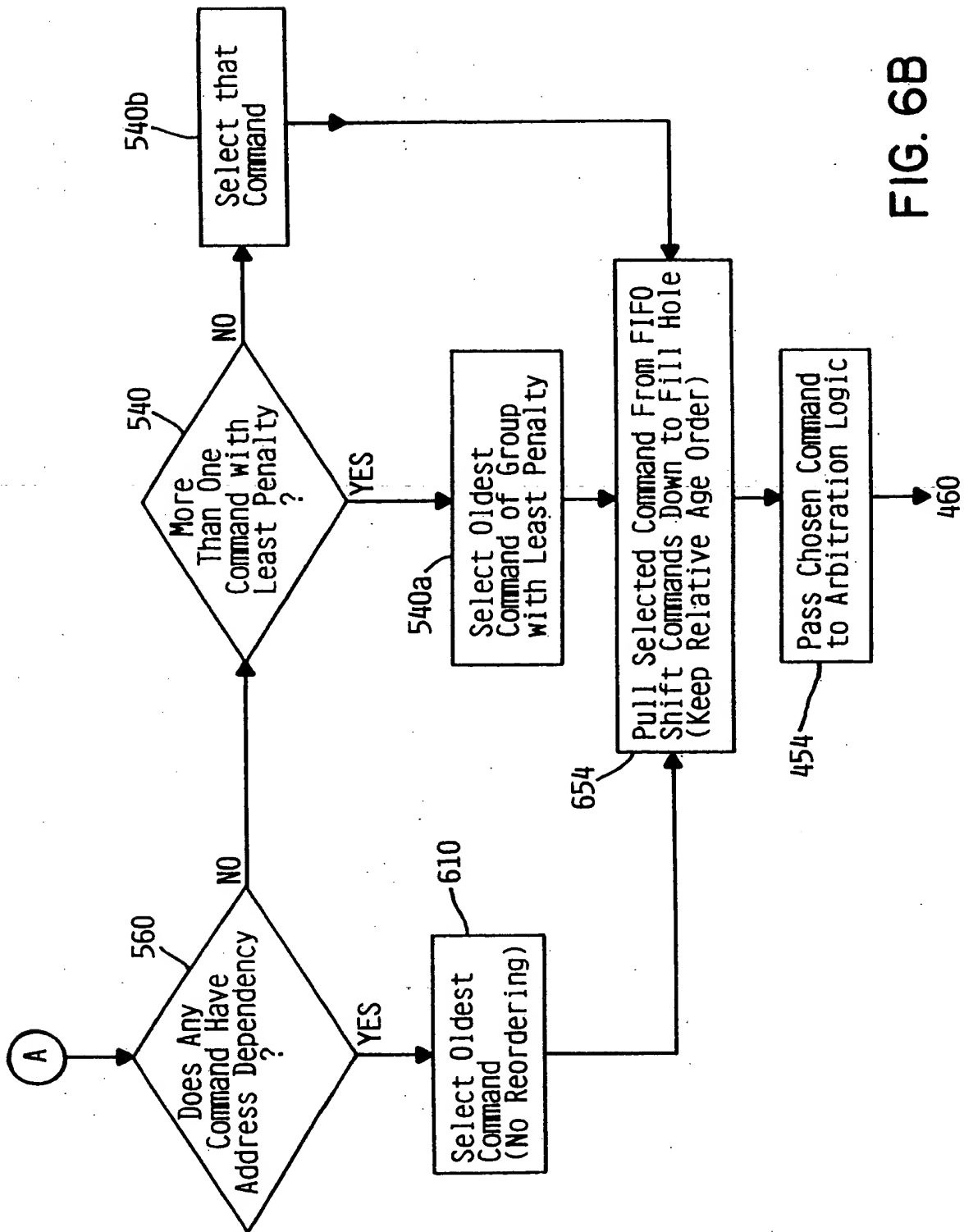


FIG. 6B



APPROVED	Q.G. FIG.	CLASS	SUBCLASS
BY			
DRAFTSMAN			

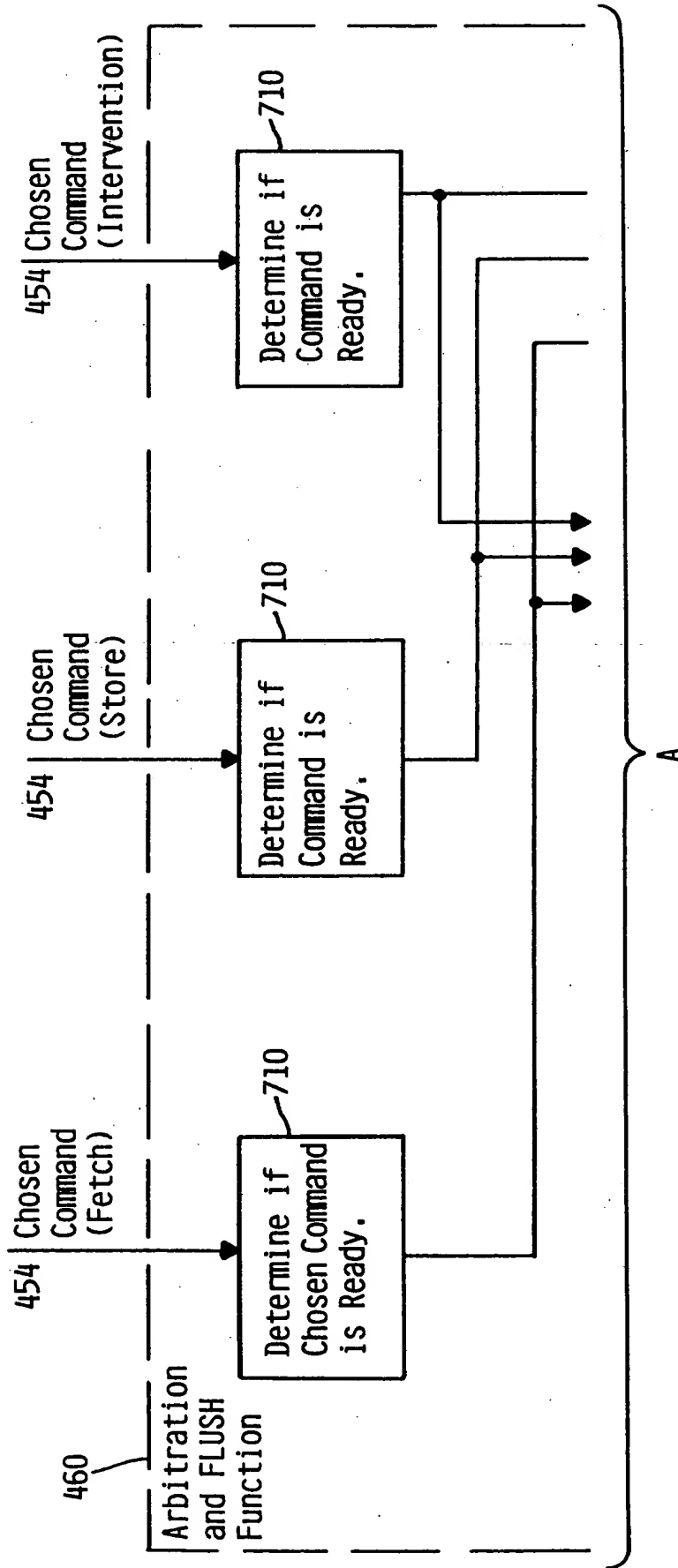


FIG. 7A

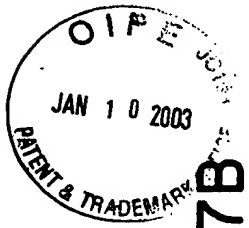
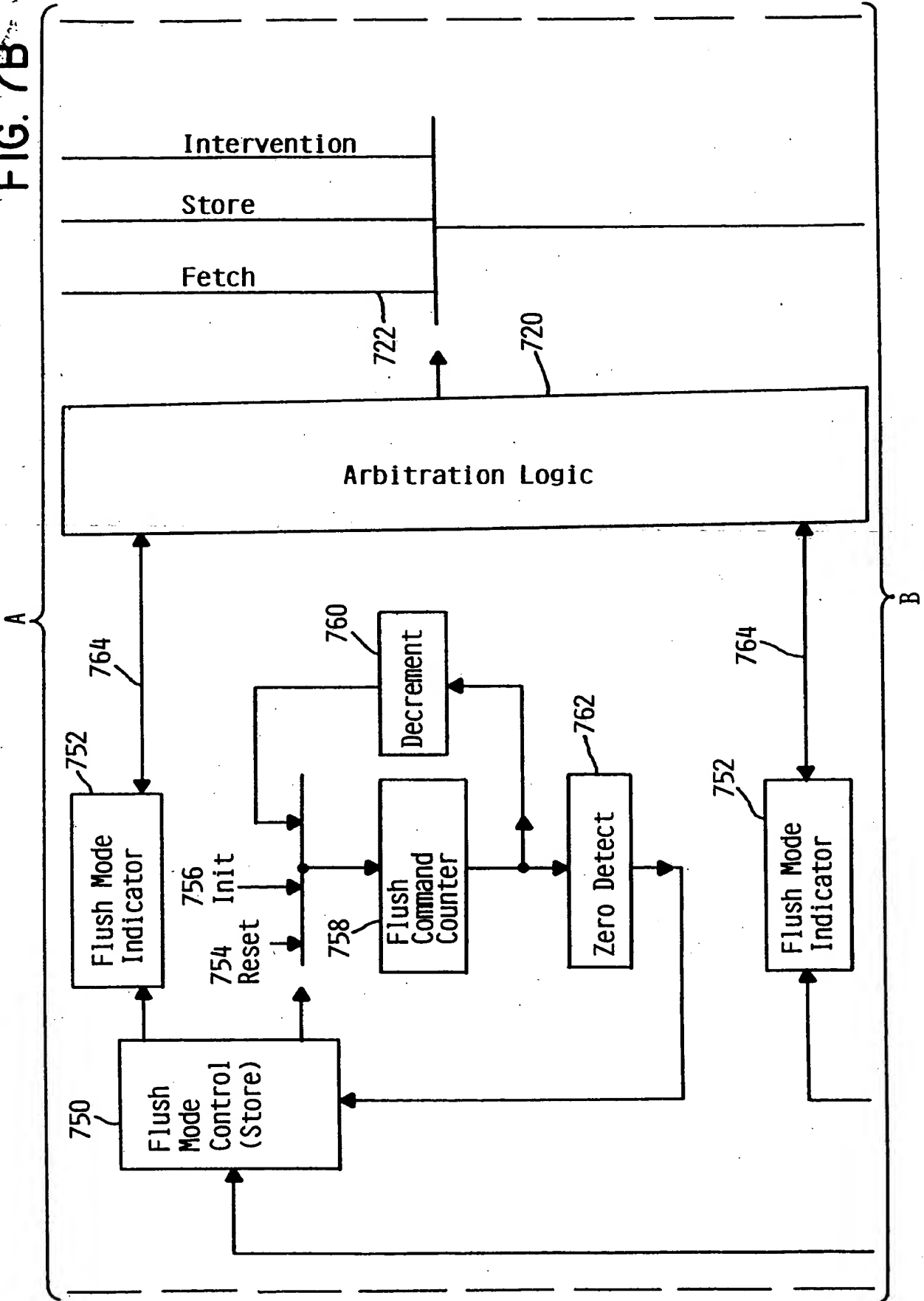


FIG. 7B

APPROVED	O.G. FIG.	CLASS	SUBCLASS
BY			
DRAFTSMAN			





APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

B

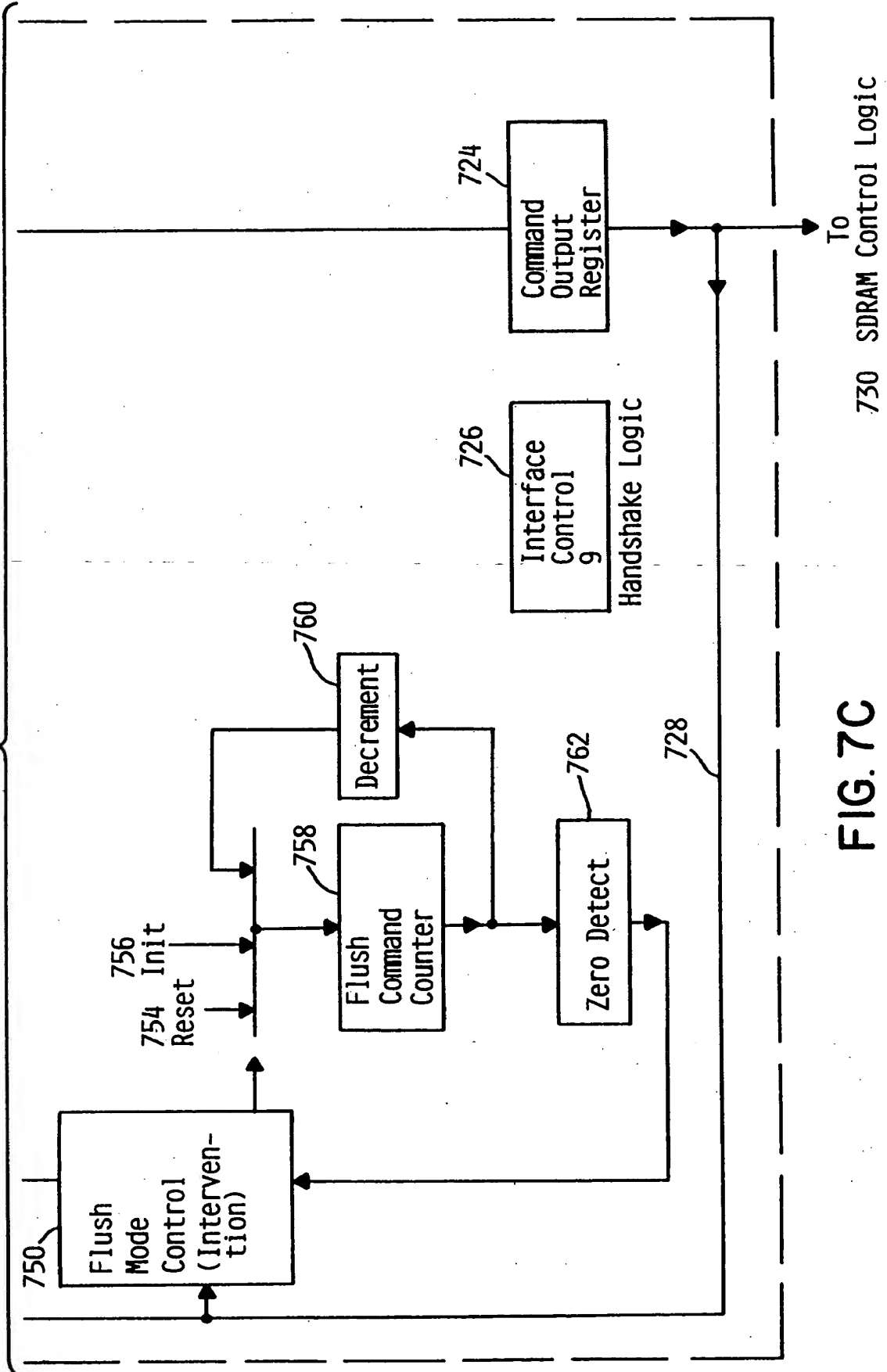


FIG. 7C



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O.G. FIG.	CLASS	SUBCLASS
APPROVED	BY	DRAFTSMAN

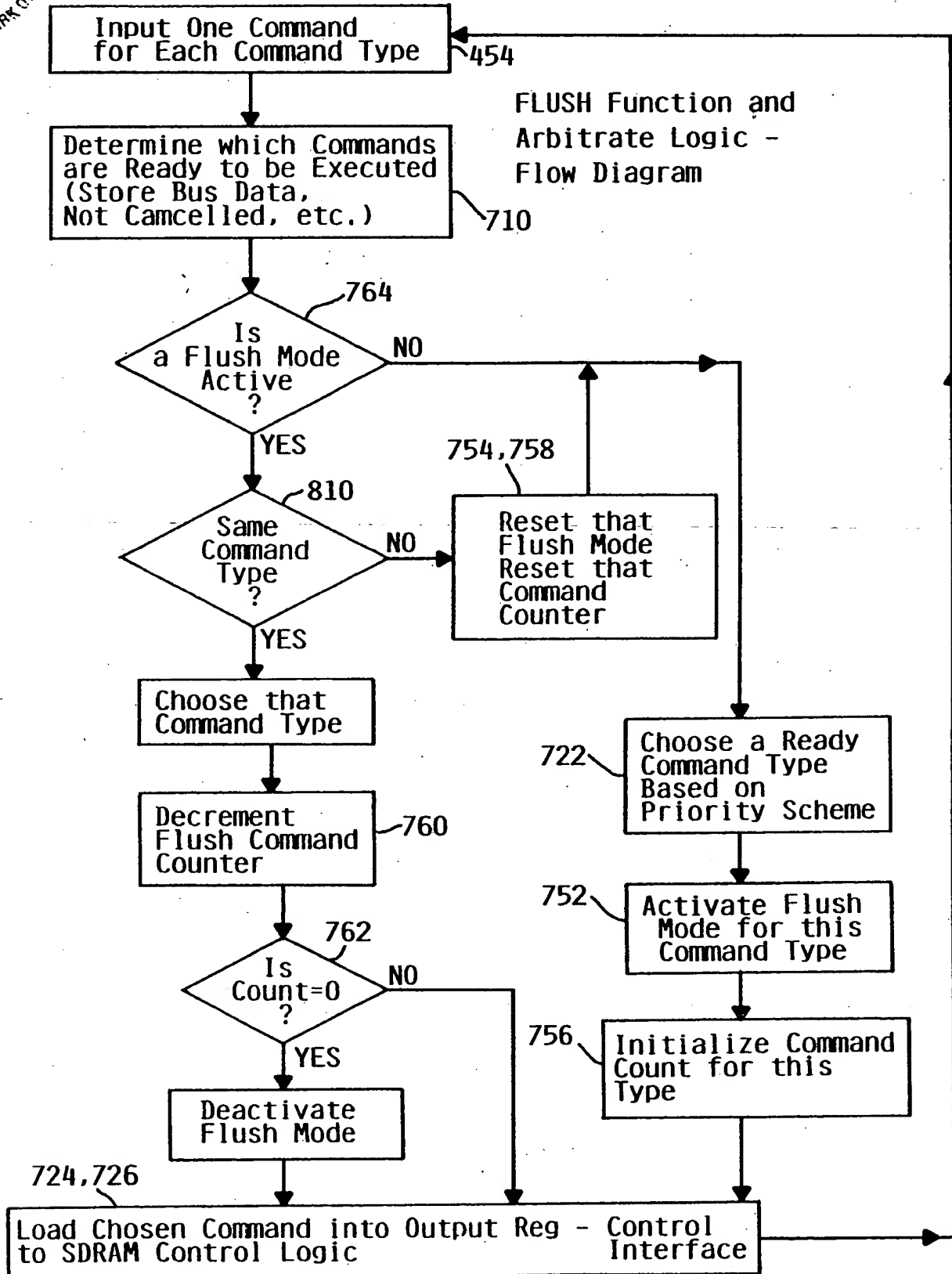
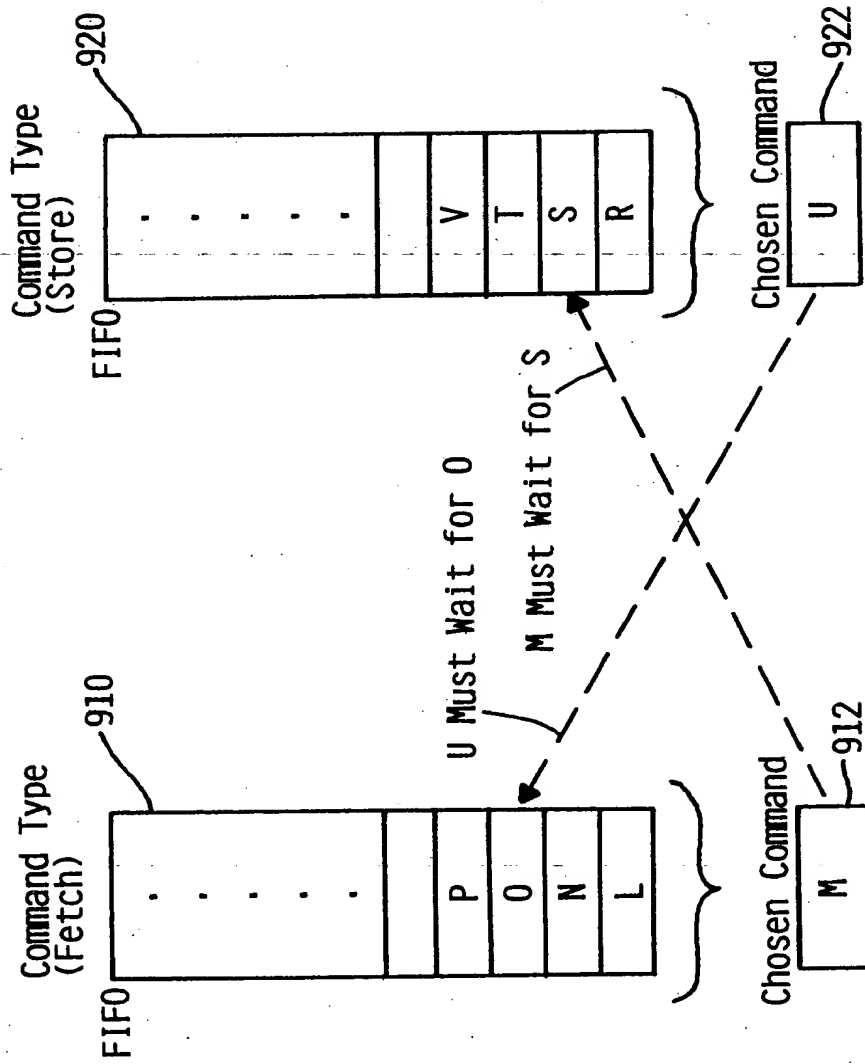


FIG. 8



APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

Deadlock Condition - (Occurred by ReOrdering)



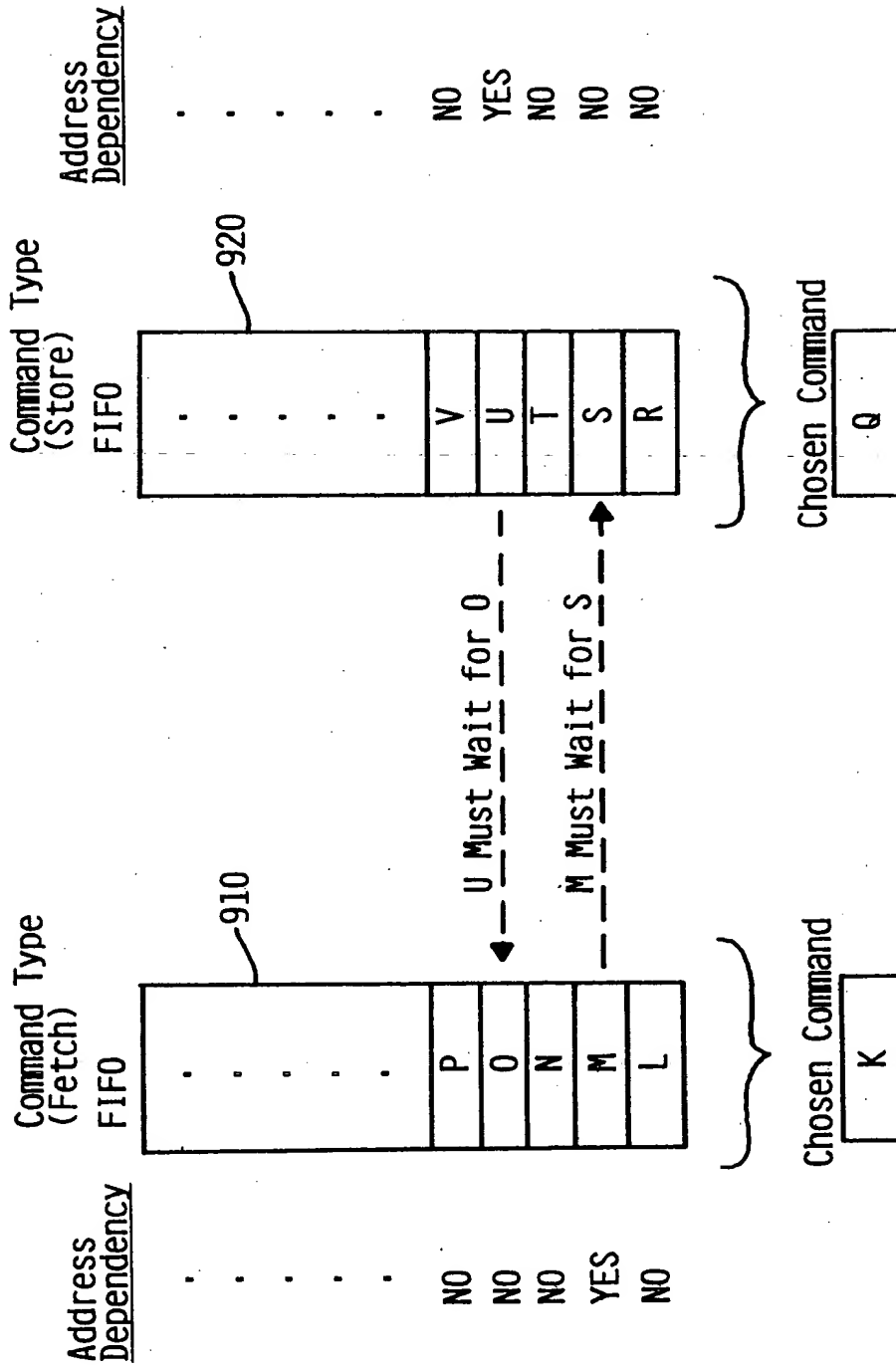
- \* If certain command chosen by ReOrder Logic, then deadlock
- Key idea is to not reorder if any command being considered has an address dependency

FIG. 9A



APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
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Possible Deadlock Condition - (Avoided by executing as FIFO)



- Command U address is in same cache line as command O, and was received after command O.
- Command M address is in same cache line as command S, and was received after command S.
- \* If commands in both FIFOs execute in order, then no deadlock.

FIG. 9B